

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Stultz, Paul Dennis et al.

Serial No. 09/919,444

Filed: July 31, 2001

For: COMPUTER SECURITY DURING
POWER-ON SELF TEST

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Group Art Unit: 2137

Examiner: Pyzocha, Michael J.

AMENDED BRIEF OF APPELLANT

Mail Stop Appeal Briefs – Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Brief is submitted in connection with an appeal from the Final Rejection of the Examiner mailed to the Applicants on March 2, 2006, finally rejecting claims 1, 3-12, 14-24 and 26-32, all of the pending claims in this application. Two additional copies of this Brief are submitted herewith.

REAL PARTY IN INTEREST

The real party in interest is Dell Products L.P., a Texas Limited Partnership, having a principal place of business at One Dell Way, Round Rock, Texas 78661, United States of America.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and no related interferences regarding the above-identified patent application.

STATUS OF CLAIMS

The status of the claims is as follows:

Claims 1, 3-12, 14-24 and 26-32 are pending in the application and are rejected.

Claims 2, 13 and 25 are canceled.

Claims 1, 3-12, 14-24 and 26-32 are being appealed.

Claims 1, 3-12, 14-24 and 26-32 are set forth in Appendix A, attached hereto.

STATUS OF AMENDMENTS

A Final Office Action was mailed to the Applicants on March 2, 2006, finally rejecting claims 1, 3-12, 14-24 and 26-32.

A Notice of Panel Decision from the Pre-Appeal Brief Review was mailed on May 23, 2006, indicating that claims 1, 3-12, 14-24 and 26-32 were rejected and that the application remains under appeal because there is at least one actual issue for appeal, and requiring Applicants to submit an Appeal Brief in accordance with 37 CFR §41.37.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, in one embodiment, as now set forth in independent claim 1, relates to a computer system comprising:

a processor;

(page 6, line 6, Fig. 1)

a memory coupled to the processor, the memory storing a pre-selected input characteristic;

(page 6, line 7, Fig. 1)

a stored password;

(page 9, lines 14-18, Fig. 3)

instructions, during a POST procedure when security is enabled, causing the computer system to enter a mode non-responsive to inputs except the pre-selected input characteristic;

(page 9, lines 3-5, Fig. 3)

instructions causing a system boot or reboot not to be halted during a POST procedure, by an unauthorized user, by adding a timeout to the password;

(page 9, lines 19-29)

instructions causing the processor to compare a first input entered by the user to the pre-selected input characteristic;

(page 9, lines 3-5, Fig. 3, step 330)

instructions causing the processor to ignore an input during a power-on self test procedure unless the first input matches the pre-selected input characteristic;

(page 9, lines 1-5) (page 7, lines 5-7) (page 12, lines 9-10)

instructions causing the processor to prompt a user of the computer system to enter a password when the first input matches the pre-selected input characteristic;

(page 9, lines 6-9) (page 12, lines 11-13)

in response to a password entry, the processor ignores an input other than the pre-selected input characteristic if:

(page 9, lines 1-18)

a) the password is not entered within a pre-specified time period after the prompt; and

(page 9, lines 9-11)

b) the password is entered within the pre-specified time period, but there is no match with the stored password; and

(page 9, lines 12-14)

in response to a password entry, the processor processes other inputs in addition to the pre-selected input characteristic if:

a) the password is entered within the pre-specified time period and matches the stored password.

(page 9, lines 14-18)

The present invention, in an embodiment, as now set forth in independent claim 12, relates to a method of operating a computer system comprising:

ignoring all inputs from an input/output device during a power-on self test procedure except a pre-specified input;

(page 12, lines 8-10) (page 7, lines 5-7) (page 9, lines 10-12)

upon detection of the pre-specified input, prompting a user for a password;

(page 9, Lines 6-9) (page 12, lines 11-13)

causing the computer system to enter a mode non-responsive to inputs, except the pre-specified input, during a POST procedure when security is enabled;

(page 8, lines 13-28) (p. 7, lines 5-7)

causing a system boot or reboot not to be halted during a POST procedure, by an unauthorized user, by adding a timeout to the password;

(page 9, lines 19-29)

in response to a password entry, the processor ignoring an input other than the pre-selected input characteristic if:

(page 9, lines 1-18)

a) the password is not entered within a pre-specified time period after the prompt; and

(page 9, lines 9-11)

b) the password is entered within the pre-specified time period, but there is no match with the stored password; and

(page 9, lines 12-14)

in response to a password entry, the processor processing other inputs in addition to the pre-selected input characteristic if:

a) the password is entered within the pre-specified time period and matches the stored password.

(page 9, lines 14-18)

The present invention, in one embodiment, as now set forth in independent claim 23, relates to a computer program product comprising a storage medium storing data and instructions operable to:

mask all inputs from an input/output device during a power-on self test procedure, except at least one input that corresponds to predetermined data;

(page 9, lines 10-12) (page 7, lines 5-7) (page 12, lines 8-10)

upon reception of an input that corresponds to the predetermined data, transmit a prompt for a password;

(page 9, lines 6-9) (page 12, lines 11-13)

cause the computer system to enter a mode non-responsive to inputs, except the at least one input, during a POST procedure when security is enabled;

(page 8, lines 13-28) (p. 7, lines 5-7)

cause a system boot or reboot not to be halted during a POST procedure, by an unauthorized user, by adding a timeout to the password;

(page 9, lines 19-29)

in response to a password entry, cause the processor to ignore an input other than the pre-selected input characteristic if:

(page 9, lines 1-18)

a) the password is not entered within a pre-specified time period after the prompt; and

(page 9, lines 3-5)

b) the password is entered within the pre-specified time period, but there is no match with the stored password; and

(page 9, lines 12-14)

in response to a password entry, cause the processor to process other inputs in addition to the pre-selected input characteristic if:

a) the password is entered within the pre-specified time period and matches the stored password.

(page 9, lines 14-18)

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1, 3-12, 14-24 and 26-32 are unpatentable under 35 U.S.C. §103(a) over NEC and in view of Microsoft Computer Dictionary (Third Edition, 1997) (hereinafter Microsoft), further in view of Hobson et al (US. 6,065,067) (hereinafter Hobson) and further in view of Willner et al (U.S. 6,064,666) (hereinafter Willner).

ARGUMENT

Claims 1, 12 and 23 recite comparing a first input to a pre-selected input characteristic, ignoring an input during a power-on self test procedure unless the first input matches the pre-selected input characteristic and prompting a user to enter a password when the first input matches the pre-selected input characteristic.

Claims 1, 3-12, 14-24 and 26-32

The Examiner relies on NEC, Microsoft, Hobson and Willner as follows:

As per claims 1, 12, and 23-24, NEC discloses a computer system, method and computer program product comprising: a processor; a memory coupled to the processor, the memory storing a pre-selected input characteristic; a stored password; instructions, during a

POST procedure when extended security is enabled, causing the computer system to enter a mode non-responsive to inputs except the pre-selected input; instructions causing the processor to compare a first input entered by the user to the pre-selected input characteristic; instructions causing the processor to ignore an input during a power-on self test procedure unless the first input matches the pre-selected input characteristic (see page 2-18); instructions causing the processor to prompt a user of the computer system for a password when the first input matches the pre-selected input characteristic; instructions causing the processor to compare a password entered by the user to the stored password; and instructions causing the processor to process inputs during the power-on self test procedure subsequent to the first input when the password entered by the user matches the stored password (see page 2-29) and masking a processor from the inputs from an input/out device that corresponds to the predetermined data is performed by the processor (see page 2-18).

NEC fails to disclose the memory further stores instructions causing the processor to process inputs other than the first input if the password entered by the user is entered within a pre-specified period of time after the user is prompted.

However, Microsoft teaches this method of a timeout (see page 469).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Microsoft's method of a time out for the password of the NEC system.

Motivation to do so would have been to protect it against crackers (see Microsoft page 469).

The modified NEC and Microsoft system fails to disclose in response in response to a password entry, the processor ignores an input other than the pre-selected input characteristic if the password is not entered within a pre-specified time period after the prompt; and the password is entered within the pre-specified time period, but there is no match with the stored password.

However, Hobson teaches restarting the computer when an incorrect BIOS password is entered (see column 3 lines 14-26); and Willner teaches performing the same action when either an incorrect password is entered or a timeout has occurred (see column 12 lines 9-13).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to restart the modified NEC and Microsoft system if an incorrect password is entered or a timeout occurs.

Motivation to do so would have been to protect against changing the system resources (see Hobson column 3 lines 14-26), and to block a request (see Willner column 12 lines 14-22).

As per claims 3-4, 14-15, the modified NEC, Microsoft, Hobson and Willner system discloses the data corresponds to an F2 key (see NEC page 2-18).

As per claims 5, 16, 26, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to access a system setup procedure (see page NEC 2-18).

As per claims 6, 17, 27, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to request boot functions (see page NEC 2-25).

As per claims 7, 18, 28, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to reboot the computer system (see NEC page 2-9).

As per claims 8, 19, 29, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to switch off a power supply of the computer system (see NEC page 2-8).

As per claims 9, 20, 30 the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to access an Option Read Only Memory utility (see NEC pages 2-18 through 2-33).

As per claims 10, 21, 31, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to halt a power-on self-test function (see NEC page 2-17 and entering the setup halts the POST).

As per claims 11, 22, 32, the modified NEC, Microsoft, Hobson and Willner system discloses the processing of inputs other than the first input enables the user to omit a power-on self-test function (see rejection of claims 8, 19, 29 where it is clear that power the system off will omit the POST.)

As detailed below, the Applicants take the position that the Examiner has improperly applied NEC, Microsoft, Hobson and Willner.

A. Reference (or references) Fail to Teach or Suggest All Claim Elements

As the PTO recognizes in MPEP §2142:

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The USPTO clearly cannot establish a *prima facie* case of obviousness in connection with the amended claims for the following reason.

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said matter pertains ... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated.

B. Reference (or references) Does Not Suggest Desirability of the Claim Combination

There is still another compelling, and mutually exclusive, reason why the references cannot be combined and applied to reject the claims under 35 U.S.C. §103(a).

The PTO also provides in MPEP §2142:

[T]he Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. ...[I]mpermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Here, the references, alone or in combination do not teach, or even suggest all the limitations of the claim or the desirability of the combination because neither teaches nor suggests providing the following:

The rejection admits that NEC fails to disclose the memory further stores instructions causing the processor to process inputs other than the first input if the password entered by the user is entered within a pre-specified period of time after the user is prompted.

The rejection argues that Microsoft teaches this method of a timeout (see page 469), that at the time of the invention it would have been obvious to a person of ordinary skill in the art to use Microsoft's method of a time out for the password of the NEC system and that motivation to do so would have been to protect it against crackers (see Microsoft page 469).

The rejection also admits that the modified NEC and Microsoft systems fails to disclose in response to a password entry, the processor ignores an input other than the pre-selected input characteristic if the password is not entered within a pre-specified time period after the prompt; and the password is entered within the pre-specified time period, but there is no match with the stored password.

The rejection argues that Hobson teaches restarting the computer when in incorrect BIOS password is entered (see column 3 lines 14-26); and Willner teaches performing the same action when either an incorrect password is entered or a timeout has occurred (see column 12 lines 9-13), that at the time of the invention it would have been obvious to a person of ordinary skill in the art to restart the modified NEC and Microsoft system if an incorrect password is entered or a timeout occurs and that motivation to do so would have been to protect against changing the system resources (see Hobson column 3 lines 14-26), and to block a request (see Willner column 12 lines 14-22).

The invention specifically claims comparing a first input to a pre-selected input characteristic, ignoring an input during a power-on self test procedure unless the first input matches the pre-selected input characteristic and prompting a user to enter a password when the first input matches the pre-selected input characteristic.

In response to a password entry, the following is claimed:

1. The processor ignores an input other than the pre-selected input characteristic if:
 - a) the password is not entered within a pre-specified time period after the prompt; and
 - b) the password is entered within the pre-specified time period, but there is no match with the stored password; and
2. The processor processes other inputs in addition to the pre-selected input characteristic if:
 - (a) the password is entered within the pre-specified time period and matches the stored password.

In addition, a timeout is added to the password to provide an environment where the system boot or reboot may not be halted during a POST by an unauthorized user. The present invention claims "instructions causing a system boot or reboot not to be halted during POST procedure, by an unauthorized user, by adding a timeout to the password."

In Hobson, the computer is restarted in response to an incorrect BIOS password. Willner also relates to computer restarting. Neither reference teaches not halting a boot or reboot in progress during a POST procedure, as claimed, by adding a timeout for this purpose.

In view of the foregoing, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and a rejection under 35 U.S.C. §103(a) is not applicable.

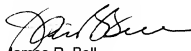
Therefore, there is no support for an obviousness rejection of the claimed subject matter as a whole because the references fail to disclose each element or suggest the missing elements.

CONCLUSION

Accordingly, it is respectfully submitted that the combination of NEC, Microsoft, Hobson and Willner does not teach nor suggest all of the claimed elements and does not suggest the desirability of the claimed combination.

For all of the foregoing reasons, it is respectfully submitted that claims be allowed. A prompt notice to that effect is earnestly solicited.

Respectfully submitted,



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Sept 25, 2006
Susan C. Lien
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